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1937

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AGE 10

5565

Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Tongareva~~ } Sheet No. 2 5565
Hydrographic }

State South Carolina

LOCALITY

St. Helena Sound

193 4

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by the form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 2

REGISTER NO.

State South Carolina

General locality St. Helena Sound

Locality -----

Scale 1:10,000 Date of survey June - July

Vessel NATOMA

Chief of Party R. P. Eyman

Surveyed by R. P. Eyman

Protracted by A. A. Lockerbie

Soundings penciled by Clifford J. Harryman

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by -----

Inked by M. Silverberg

Verified by M. Silverberg

REPORT OF DRAFTING SECTION
TO ACCOMPANY HYDROGRAPHIC SHEET NO. 2 - Eyman

LOCATION - Lat. $32^{\circ} 24'$ to $32^{\circ} 29'$, long. $80^{\circ} 23.5'$ to $80^{\circ} 29'$.

FIELD WORK - The survey of this area was done by the party of R. based at Beaufort, S. C.

RECORDS - The following field records were forwarded to the part B. H. Rigg at Charleston, S. C. to be completed by drafting sec Sheet, 15 sounding volumes, one partially destroyed volume (orig tide marigrams.

WORK ACCOMPLISHED BY THIS PARTY - Smooth Sheet projection, plott protracted positions, penciled soundings, and reduced tidal data is felt that there is urgent need for this sheet in Washington, forwarded immediately by messenger. The following work ordinary this party has not been finished due to the lack of time: Dept geographic names, listing of channels, dangers, and comparison v surveys.

A list of discrepancies has been made and under normal proc would have been forwarded through Lt. Comm. R. P. Eyman for a fi and completion of descriptive report. If it is considered neces gested that this be done after the urgent need of the sheet in W over. Work sheet used by this party is included to show work co

DISCREPANCIES - Lat. $32^{\circ} 25.4'$, long. $80^{\circ} 26.4'$, positions 12 to day, have^{No} soundings. Should these soundings be zero or omitted?

Lat. $32^{\circ} 27.8'$, long. $80^{\circ} 25.3'$, Red "D" day and green "U" crossings probably due to abnormal tides on red "D" day.

Lat. $32^{\circ} 28.1'$, long $89^{\circ} 26.6'$, Line between positions 105 crosses line between 175 to 176 "D" day, with a nine foot sound
OK - sharp slope - X-ray

Lat. $32^{\circ} 28.0'$, long. $89^{\circ} 25.5'$, All crossings between purp
Purple
are in poor agreement. Red days are too shoal.

Lat. $32^{\circ} 26.3'$, long. $80^{\circ} 26.3'$, A 13' sounding on line bet
accepted. near edge of chart
day falls between 16, 17, and 18 foot soundings.

All shoals, located by sextant fixes (detached positions), in according to position numbers and boat sheet. They do not a
ings and they should all be investigated by the hydrographer.

Lat. $32^{\circ} 27.3'$, long. $80^{\circ} 27.0'$ *pos. not needed. Area adequately covered by these lines. sym.*

. Lat. $32^{\circ} 27.1'$, long $89^{\circ} 27.0'$ - On line between 15 to 16
plotted. no indication of 21
sounding falls between 7 & 9 foot soundings. *on previous survey. See pp 99*
(Lat $32^{\circ} 25.8'$ - Long $80^{\circ} 23.9'$)

Vol. 6, page 71, position 94. The sounding on this positio
(Lat $32^{\circ} 26.3'$ Long $80^{\circ} 2$)

Vol. 7, page 7, positions 125 to 126. Same as above.

Vol. 8, page 8, position 28. Second sounding after positio
(Lat $32^{\circ} 28.1'$ Long $80^{\circ} 28.6'$)
Similar case
1/2 recorded in foot column. Probably a 36' - not essential in view of its doubtful character
Positions 1 to 76, purple "G" day are missing. Both boat

record were apparently destroyed by fire.

Vol. ¹¹2 - All work in this volume was copied from the origin
was damaged by fire.

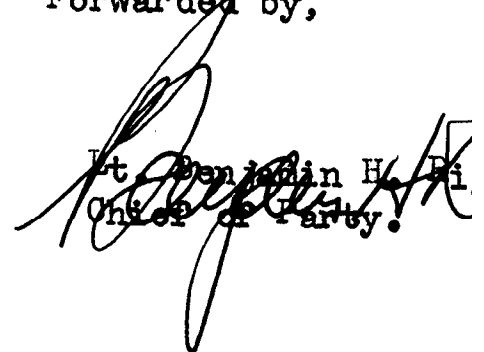
Vol. 10 - The original volume containing work shown in thi

STATISTICS -

Vol. No.	Miles	No. of Soundings	No.
1	67.8	1842	
2	23.0	811	
3	49.3	1717	
4	43.7	1632	
5	40.6	1496	
6	48.7	1684	
7	36.5	1201	
8	59.7	1823	
9	55.9	1716	
10	21.8	640	
11	24.4	727	
12	63.9	1775	
13	25.2	718	
14	11.6	452	
15	28.3	1074	
	<u>577.4</u>	<u>23769</u>	
	600.4		

Positions protracted by A. A. Lockerbie
Soundings penciled by C. J. Harryman.

Forwarded by,


Lt. Benjamin H. Pi
Chief of Party.

Altitude was evidently entered in "lat" col.

DISCREPANCIES cont. - Lat. 32° 28.0', long. 80° 24.6' - Peculi
between pos. 33 & 34 brown "A" day. *evidently 10' error*

Lat. 32° 28.1', long. 80° 24.9' - Bad crossing
7 and 8 brown "A" day, and 96 - 97 brown "A" day, a ^{6'}4' against
OK. shelf here - xym.

Notes on Sheet No. 2 (Natoma)

In the vicinity of Beacon No. 2 (Gus) there are two refer
of the beacon to the southward when the position plots to the r
Vol. 3, page 52, position 78d and Vol. 4 page 54, position 24h.
to be an error of recording.

Position 1a - 130a (Brown) day, Vol. 14) could not be found
It is assumed that the work was on same sheet lost in the fire
never was plotted up. The positions as given in the sounding re
directly. No plotting of the work was done on the boat sheet 1

Lat. 32° 28.2', long 80° 24.9' - Sand spit extending, p
day, should be drawn in by hydrographer. *not drawn*

SMOOTH SHEET FIELD NO.

1. Is Field No. shown in ink on back? ✓
2. Is location (Lat. & Long. seconds in meters) 1927 triangulation stations shown? ✓
3. Is all shoreline inked? ✓
4. Has a list of topo & hydro signals been prepared as Vol. 1 of the sounding record. ✓
5. Have the dates of establishment of triangulation shown? ✓
6. Have all positions been plotted?
7. Have all soundings been plotted? ✓
8. Have characteristics of the bottom been plotted? ✓
9. Have all bad crossings been noted and listed? ✓
10. Have depth curves been drawn? NO
11. Have all dangers been noted by arrows and described?
12. Have all existing landmarks been shown & described?
13. Have the names of Isles, Rivers, Banks, etc., been shown?
14. Have Ranges been shown as directed in S.P. No. 143?
15. Have current & tide stations been plotted with lines controlling gauges shown? ✓
16. Have the limits of work on adjacent sheets been indicated and curves checked? ✓
17. Have all buoys been plotted and indicated by arrows?
18. Is there any more hydrography that should be done?

To; Mr. Bacon
From : C.F.M.

GEOGRAPHIC NAMES
SOUTH CAROLINA

Date. Jan. 8, 1935

Names approved Jan. 17, 1935. *Allen M. Strong* Di *H.*

*, Approved by the Division of Geographic Names, Department of Interior.

Ø, Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use
	----- ✓	<u>Harbor Island</u>	
	-----	<u>St. Helena Sound</u>	
	----- ✓	<u>Egg Bank</u>	
	----- ✓	<u>Harbor River</u>	
	----- ✓	<u>Morgan Island</u>	
	----- ✓	<u>Otter Islands</u>	
	----- ✓	<u>Hutchinson Island</u>	
	----- ✓	<u>St. Helena Island</u>	
	----- ✓	<u>Hunting Island</u>	
	----- ✓	<u>Johnson Creek</u>	
	----- ✓	<u>Morgan River</u>	

January

Division of Hydrography and Topography:

✓ **Division of Charts: Mr. E. P. Ellis.**

**Tide Reducers are approved in
15 volumes of sounding records for**

HYDROGRAPHIC SHEET 5565

Locality St. Helena Sound, South Carolina

Chief of Party: R. P. Eymann in 1934
Plane of reference is mean low water reading
2.5 ft. on tide staff at Beacon Green
~~ft. below B.M.~~ No Bench Marks established.

Height of mean high water above plane of reference 6

Condition of records satisfactory except as noted below:

Field Records Section (C)

HYDROGRAPHIC SHEET No. *H-5565*.....

The following statistics will be submitted with
cartographer's report on the sheet:

Number of positions on sheet	<i>4461</i>
Number of positions checked	<i>70</i>
Number of positions revised	<i>10</i>
Number of soundings recorded	<i>23,769</i>
Number of soundings revised	<i>150</i>
Number of signals erroneously plotted or transferred	<i>9</i>

Date:.....*Feb. 16, 1935*.....

Cartographer:.....*M. Silverberg*.....

Verification of soundings
Verification of sounding of names and marks *M.S.*

Verification of sounding by

Number by

H.W. Murray

Verification Report H-5565

I. Conformity to Hydrographic Manual

The sounding records are neat and legible to the requirements of the hydrographic manual.

The position numbers are too large. No were shown. No date was placed on reference station. All 0.5 ft. soundings were plotted as ft soundings were shown as -1.0 ft. All deeper soundings were shown as 0.5 ft. too much. report for other omissions and review for other remarks concerning.

II. Depth Curves

The zero curve is practically complete and in could be completed by the use of a dashed

The six foot, twelve foot, eighteen foot and curves are complete within the limits of.

The number of isolated spots was kept as by plotting soundings to the nearest $\frac{1}{2}$ ft.

III. Field Plotting

The field plotting was complete, except in to the extent required for the soundings. The drawn in pencil were sketched from the boat
these

Position 95 f (purple) (Lat $32^{\circ} 27.85$, Long. $80^{\circ} 26.7$.
was changed one degree to plot on time and
Positions 8, 9, 97 A (brown) (Lat $32^{\circ} 28.1$, Long 8
angles were changed as noted in records to a
crossing.

Position 23 r (green) (Lat $32^{\circ} 26.9$, Long. $80^{\circ} 2$
angle was changed 1° to plot on time and con

Position 81 e (green) (Lat $32^{\circ} 28.45$, Long $80^{\circ} 27$
plotted.

Position 2 h (green) (Lat $32^{\circ} 26.3$, Long $80^{\circ} 26$
plotted.

Position 87 j was incorrectly plotted.

Office Plotting

The errors as listed in III (Field Plotting,
the tide reducers were wrong for 72 pos
and the soundings had to be replotted.
as indicated under TP I B this report to
corrected.

All dangers, oyster bars, breakers, tide,
flats had to be plotted from the records as
several islands were missing and had to be

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5565 (1934).

St. Helena Sound, South Carolina

Surveyed June-July, 1934

Instructions dated November 2, 1933 (NATOMA).

Hand Lead Soundings - 3-Point Control on Shore S

Chief of Party - R. P. Eyman.

Surveyed by - R. P. E.

Protracted by - A. A. Lockerbie.

Soundings plotted by - C. J. Harryman.

Verified and inked by - M. Silverberg.

1. Condition of Records.

The records are neat, legible and conform to the requirements of the Hydrographic Manual except as follows:

a. On the cover label and title page of the sounding report position numbers and day letters were in black ink. They were changed to the proper color in the office. (Par. 138)

b. Descriptive notes recorded in the records and noted on the smooth sheet such as tide rips, breakers, oyster bars, etc., small islands originating with the aerial survey were added to the smooth sheet. These were added in the office.

c. A number of discrepancies and questions are present in the Final Report which are usually settled in the field. The field work and the plotting were done by different parties.

d. No chart containing objects for locating Aids to Navigation used by the Lighthouse Bureau has been received by this office.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the requirements for the project except as noted in paragraphs 9 and 10.

3. Sounding Line Crossings.

5. Junctions with Contemporary Surveys.

- a. The junction on the northeast with H-5526 (1934) is satisfactory. However, in the vicinity of lat. $32^{\circ}26'80''23''.4$, a few soundings of H-5526 (1934) vary from deeper than those of the present survey. The difference is partly due to irregular bottom and slight misplaced soundings.
- b. The junction on the west and north will be considered as work is received from the field.
- c. The junction on the southwest with H-5650 (1934) will be considered in the review of that sheet.
- d. The eastern and southeastern limits of the present survey represent the limits of the present project. Attention is called to the fact that the present survey is not in close agreement with the most recent previous survey, H-3667 (1914), at the

6. Comparison with Prior Surveys.

Prior surveys made within the limits of the present survey are as follows:

H-620 (1856-57)

H-1349b (1876)

H-649 (1853-57)

H-3667 (1914)

A study of the above surveys in connection with the present survey reveals numerous changes in depth. Many of the shoals have changed in position and several large bare shoals have entirely disappeared. Only a few of the old shoals remain unchanged. A detailed study would serve no useful purpose. In view of the many changes noted, a discussion of the charted depths from the old surveys are shoaler than those of the present survey is not necessary. As the entire area is believed to be subject to changes and as the present survey is detailed and covers the entire area, all of the prior surveys mentioned above superseded by H-5565 (1934) within the common areas.

7. Comparison with Chart Nos. 435 and 436.

b. Aids to Navigation.

(1) Beacons shown on the present survey are located the same positions as shown on the charts.

(2) Red Buoy N "4" in approximate lat. $32^{\circ}28'$, long. located on the present survey about 280m. NWxW of its position. However, its value as an aid is not impaired. Channel buoy in approx. lat. $32^{\circ}27'$, long. $80^{\circ}24'$ was on present survey about 100m. SxW of the charted position. It can be safely passed on either side with depths of 21 fathoms.

8. Field Plotting.

Field protracting and plotting were accurate and conformed to the requirements of the Hydrographic Manual with the exception that a number of soundings were changed in the office due to errors in the tide reducer.

9. Doubtful Soundings.

The following soundings are of doubtful accuracy and are listed in the Descriptive Report (pages 1 and 2). They are mens' errors and should have been investigated in the field.

a. 2 foot sounding (lat. $32^{\circ}27'.1$, long. $80^{\circ}27'.1$)

This sounding (pos. 15 to 16r green) was obtained as a 9 foot sounding. Soundings on nearby lines show shoaling. The field party mentioned the sounding report but since they made no recommendation and with the boatsheet, it has been retained as recorded.

b. 17 foot sounding (lat. $32^{\circ}27'.0$, long. $80^{\circ}27'.0$)

This sounding (pos. 141 to 142d, green) was obtained as a 23 foot sounding. Comparison of the area with the present survey shows shoaling of about 2 feet on the present survey. The fact that line 12 to 13-1 (green) was run over the previous line and shows depths of 22 to 23 fathoms is an indication of shoaling. The 17 foot sounding has

areas on the sheet so as to equalize the spacing of area covered is complete. On the whole the survey is satisfactory, and no additional field work is required.

11. Note to Compiler.

Numerous shoal soundings were obtained on the present which vary 4 to 8 feet shoaler than the surrounding. These soundings have been investigated and in nearly all were marked O.K. in the sounding records at the time. In addition, several soundings were confirmed by present and actually represent hard spots of former shoal areas which have not changed.

12. Superseding Previous Surveys.

Within the area covered, H-5565 (1934) supersedes the following surveys for charting purposes:

H-620	(1856-57)	in part.
H-649	(1853-57)	in part.
H-1349b	(1876)	in part.
H-3667	(1914)	in part.

13. Reviewed by - Harold W. Murray, March 4, 1935.

Inspected by - R. L. Johnston.

Examined and approved:

C. K. Green, *C. K. Green.*
Chief, Section of Field Records.

F. S. Borden
Chief, Section of Field Work.

L. O. S.
Chief, Division

G. W. H.
Chief, Division

Applied to Chart 793, June 2, 1936 H.E.
" " " 1239 Apr. 1937 :